

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. **(currently amended)** A method of ~~method for~~ switching between a WCDMA modem and a CDMA-2000 modem of ~~modems, each modem being employed in an MM-MB (multimode-multiband) terminal being under a WCDMA idle state,~~ when the MM-MB terminal being in a WCDMA idle state moves from an overlay zone into a CDMA-2000 zone, said method comprising the steps of:

(a) receiving a WCDMA signal transmitted from a WCDMA system, and measuring an Ec/Io (energy of carrier/interference of others) value by using the WCDMA signal;

(b) determining whether the Ec/Io value is smaller than a predetermined CDMA-2000 ON threshold TH_{ON} ;

(c) if the Ec/Io value is smaller ~~than the~~ than TH_{ON} , ~~starting driving a timer~~ to measure a time lapse, and determining whether the time lapse exceeds a preset CDMA-2000 ON condition time H_d ;

(d) if the time lapse ~~exceeds the~~ exceeds H_d , ~~activating a~~ activating the CDMA-2000 modem; and

(e) performing an initialization for a CDMA-2000 system to switch the MM-MB terminal from the WCDMA idle state into a CDMA-2000 idle state.

2. **(currently amended)** The ~~switching~~ method of claim 1, wherein the MM-MB terminal inspects a CPICH (common pilot channel) periodically to receive the

WCDMA signal at step (a); and

the CDMA-2000 modem is activated in step (d) while the WCDMA signal is still being received over the CPICH.

3. **(currently amended)** The ~~switching~~ method of claim 1, wherein the time lapse at step (c) is a cumulative time during which the E_c/I_o value is maintained smaller than the CDMA-2000 ON threshold TH_{ON} .

4. (original) The method of claim 1, wherein the initialization at step (e) is performed through a system determination substate, a pilot channel acquisition substate and a synchronous channel acquisition substate.

5. **(currently amended)** The method of claim 1, wherein, after being switched into the CDMA-2000 idle state at step (e), the MM-MB terminal deactivates the ~~controls a~~ WCDMA modem ~~to be inactivated~~.

6. **(currently amended)** A method of ~~method for~~ switching between a WCDMA modem and a CDMA-2000 modem of ~~modems, each modem employed in an~~ MM-MB terminal, ~~being under a WCDMA traffic state~~ when the MM-MB terminal moves from an overlay zone into a CDMA-2000 zone while handling a WCDMA call, said method comprising the steps of:

(a) receiving a WCDMA signal transmitted from a WCDMA system, and measuring an E_c/I_o (energy of carrier/interference of others) value by using the WCDMA signal;

(b) determining whether the E_c/I_o value is smaller than a predetermined CDMA-2000 ON threshold TH_{ON} ;

(c) if the E_c/I_o value is smaller ~~than the~~ than TH_{ON} , starting ~~driving a timer to measure~~ a time lapse, and determining whether the time lapse exceeds a preset CDMA-2000 ON condition time H_d ;

- (d) if the time lapse ~~exceeds the~~ exceeds H_d , ~~activating a~~ activating the CDMA-2000 modem, and ~~then determining whether a~~ whether the WCDMA call has been ~~call is~~ terminated; and
- (e) if the WCDMA call is determined ~~to be~~ to have been terminated, performing an initialization for a CDMA-2000 system to switch the MM-MB terminal into a CDMA-2000 idle state.

7. **(currently amended)** The method of claim 6, wherein
the MM-MB terminal inspects a CPICH (common pilot channel) periodically to receive the WCDMA signal at step (a); and
the CDMA-2000 modem is activated in step (d) while the WCDMA call is still being handled by the WCDMA modem.

8. **(currently amended)** The method of claim 6, wherein the time lapse at step (c) is a cumulative time during which the E_c/I_o value is maintained smaller than the CDMA-2000 ON threshold TH_{ON} .

9. **(currently amended)** The ~~switching~~ method of claim 6, wherein, if the WCDMA call is determined to have not been terminated ~~terminated, at~~ step (d), the method further includes the steps of:

- (d1) determining whether the E_c/I_o value is larger than a predetermined CDMA-2000 OFF threshold TH_{OFF} ;
- (d2) if the E_c/I_o value is larger ~~than the~~ than TH_{OFF} , ~~starting driving the timer~~ to measure another time lapse, and determining whether said another time lapse exceeds a preset CDMA-2000 OFF condition time H_c ; and
- (d3) if said another time lapse ~~exceeds the~~ exceeds H_c , ~~inactivating~~ deactivating the CDMA-2000 modem that has been activated at step (d) and returning to step (a).

10. **(currently amended)** The method of claim 9, wherein, if the E_c/I_o value is not larger ~~than the~~ than TH_{OFF} at step (d1), the MM-MB terminal returns to step (d) to determine once more whether the WCDMA ~~call is~~ call has been terminated.

11. **(currently amended)** The method of claim 9, wherein said another time lapse at step (d2) is a cumulative time during which the E_c/I_o value is maintained larger than the CDMA-2000 OFF threshold TH_{OFF} .

12. **(currently amended)** The method of claim 9, wherein, if the another time lapse does not exceed the CDMA-2000 OFF condition time H_c at step (d2), the MM-MB terminal returns to step (d) to determine once more whether the WCDMA ~~call is~~ call has been terminated.

13. **(currently amended)** The method of claim 6, wherein, ~~if the WCDMA call is terminated,~~ step (e) further includes the sub-steps of:

(e1) inspecting another service channel FA (frequency assignment) of the WCDMA system;

(e2) determining whether another WCDMA signal is ~~inspected~~ found; and

(e3) if said another WCDMA signal is ~~inspected~~ found, switching the MM-MB terminal into a WCDMA idle state.

14. **(currently amended)** The method of claim 13, wherein, if said another WCDMA signal is not found ~~inspected~~ at step (e2), the MM-MB terminal ~~performs an~~ performs said initialization into the CDMA-2000 system to be switched ~~into a~~ into said CDMA-2000 idle state.

15. **(currently amended)** The method of claim 14, wherein, after being switched into the CDMA-2000 idle state, the MM-MB terminal deactivates the ~~controls a~~ WCDMA modem ~~to be inactivated~~.

16. **(currently amended)** A method of ~~method for switching between a CDMA-2000 modem and a WCDMA modem of modems, each modem being employed in an MM-MB (multimode-multiband) terminal being under a CDMA 2000 idle state, when the MM-MB terminal being in a CDMA-2000 idle state moves from a CDMA-2000 zone into an overlay zone, said method~~ comprising the steps of:

- (a) monitoring a paging channel of a CDMA-2000 system periodically while maintaining the MM-MB terminal in the CDMA-2000 idle state;
- (b) analyzing an overhead message received ~~from a~~ from the CDMA-2000 system and determining whether the MM-MB terminal is located in the overlay zone;
- (c) if the MM-MB terminal is determined to be located in the overlay zone, ~~activating a~~ activating the WCDMA modem; and
- (d) performing an initialization process for a WCDMA system to switch the MM-MB terminal from the CDMA-2000 idle state into a WCDMA idle state.

17. **(currently amended)** The method of claim 16, wherein the MM-MB terminal determines whether the MM-MB terminal is located in the overlay zone by investigating a base ID of a system parameter message included in the overhead message analyzed at step (b).

18. **(currently amended)** The method of claim 16, wherein, if the MM-MB terminal is not determined to be located in the overlay zone at step (b), the MM-MB terminal returns to step (a) to monitor the paging channel again.

19. **(currently amended)** The method of claim 16, wherein, after being switched into the WCDMA idle state, the MM-MB terminal deactivates the ~~renders a~~ CDMA-2000 modem ~~inactivated~~.

20. **(currently amended)** A method of ~~method for~~ switching between a CDMA-2000 modem and a WCDMA modem of modems, each modem being employed in an MM-MB (multimode-multiband) terminal ~~being under a CDMA-2000 traffic state~~, when the MM-MB terminal being in a CDMA-2000 traffic state moves from a CDMA-2000 zone into an overlay zone, said method comprising the steps of:

- (a) monitoring a paging channel of a CDMA-2000 system periodically while maintaining the MM-MB terminal in the CDMA-2000 traffic state to handle a CDMA-2000 call;
- (b) analyzing an overhead message received ~~from a~~ from the CDMA-2000 system and determining whether the MM-MB terminal is located in the overlay zone;
- (c) if the MM-MB terminal is determined to be located in the overlay zone, determining ~~whether a~~ whether the CDMA-2000 ~~call is~~ call has been terminated while maintaining the MM-MB terminal in the CDMA-2000 traffic state;
- (d) if the CDMA-2000 call is determined ~~to be~~ to have been terminated, ~~activating a~~ activating the WCDMA modem; and
- (e) performing an initialization process for a WCDMA system to switch the MM-MB terminal into a WCDMA idle state.

21. **(currently amended)** The method of claim 20, wherein the MM-MB terminal determines whether the MM-MB terminal is located in the overlay zone by investigating a base ID of a system parameter message included in the overhead message analyzed at step (b).

22. **(currently amended)** The method of claim 20, wherein, if the MM-MB terminal is not determined to be located in the overlay zone at step (b), ~~procedure~~ the MM-MB terminal returns to step (a) to monitor the paging channel again.

23. **(currently amended)** The method of claim 20, wherein, after being switched into the WCDMA idle state, the MM-MB terminal deactivates the ~~renders a~~ CDMA-2000 modem

inactivated.

24. **(currently amended)** A multimode-multiband terminal capable of accommodating both a synchronous CDMA-2000 service and an asynchronous WCDMA service and operating in at least two frequency bands, said terminal comprising:

an RF (radio frequency) antenna for transceiving a CDMA-2000 signal and/or a WCDMA signal;

an RF transceiver coupled to the RF antenna for demodulating a WCDMA pilot signal received from the RF antenna and outputting the demodulated WCDMA pilot signal;

a pilot signal measurement unit coupled to the RF transceiver for measuring an intensity of the demodulated WCDMA pilot signal to generate an Ec/Io value;

a WCDMA modem and a CDMA-2000 modem coupled to the RF transceiver for processing a digital signal received from the RF transceiver and performing a call processing according to protocols defined by a WCDMA standard and a CDMA-2000 standard, respectively;

a ~~flash~~-memory for storing a modem-to-modem switching program configured for capable of performing a switching between the WCDMA modem and the CDMA-2000 modem based on ~~an~~ the Ec/Io value; and

a controller coupled to the pilot signal measurement unit, the memory and the WCDMA and CDMA-2000 modems for

(i) receiving the Ec/Io value from the pilot signal measurement unit, and

(ii) loading and executing the modem-to-modem switching program from the memory to activate and activating the CDMA-2000 modem if a time lapse, during which the Ec/Io value is maintained smaller than a predetermined CDMA-2000 ON threshold TH_{ON} , is greater than a preset CDMA-2000 ON condition time H_d .

25. **(currently amended)** The multimode-multiband terminal of claim 24, wherein the

controller loads the modem-to-modem switching program at the moment the E_c/I_o value starts to be smaller than the CDMA-2000 ON threshold TH_{ON} or when it is determined that the multimode-multiband terminal enters an overlay zone by analyzing system information.

26. **(currently amended)** The multimode-multiband terminal of claim 24, wherein, after the CDMA-2000 modem is activated and an initialization into a CDMA-2000 system is completed so that the multimode-multiband terminal is switched into a CDMA-2000 idle state, the controller deactivates ~~controls~~ the WCDMA modem ~~under operation to be inactivated~~.

27. **(currently amended)** The multimode-multiband terminal of claim 24, wherein, even if the CDMA-2000 modem has been activated ~~is activated~~ based on the E_c/I_o value being smaller than TH_{ON} during the time lapse greater than H_d , the controller still deactivates ~~controls~~ the CDMA-2000 modem ~~to be inactivated~~ if another time lapse₂ during which the E_c/I_o value is maintained larger than a predetermined CDMA-2000 OFF threshold TH_{OFF2} is greater than a preset CDMA-2000 OFF condition time H_c .

28. **(currently amended)** The multimode-multiband terminal of claim 24, wherein, after the WCDMA modem is activated and an initialization into a WCDMA system is completed so that the multimode-multiband terminal is switched into a WCDMA idle state, the controller deactivates ~~controls~~ the CDMA-2000 ~~modem under operation to be inactivated~~.

29. **(currently amended)** The multimode-multiband terminal of ~~claim 24~~ claim 27, wherein information upon the CDMA-2000 ON threshold TH_{ON} , the CDMA-2000 ON condition time H_d , the CDMA-2000 OFF threshold TH_{OFF} and the CDMA-2000 OFF condition time H_c are stored in the ~~modem-to-modem switching program~~ memory.

30. **(currently amended)** The multimode-multiband terminal of claim 24, further

comprising a timer for measuring ~~detecting~~ the time lapse and reporting the time lapse to the controller.

31. **(new)** The method of claim 1, wherein the CDMA-2000 modem is activated in step (d) before the MM-MB terminal leaves the overlay zone and while the WCDMA modem is still being activated to keep the MM-MB terminal in the WCDMA idle state.

32. **(new)** The method of claim 6, wherein the CDMA-2000 modem is activated in step (d) before the MM-MB terminal leaves the overlay zone and while the WCDMA modem is still being activated to handle the WCDMA call.